AMENDMENTS TO THE CLAIMS

Claim 1 (previously presented): A radiation wave intensity modulator, comprising:

a first element for producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

an optical transport for receiving said wave component, said transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

a transport influencer, operatively coupled to said optical transport and having at least a portion integrated with one or more guiding regions of said one or more guiding regions, for affecting said polarization property of said wave component responsive to a control signal; and

a second element for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 2 (original): The modulator of claim 1 wherein said first element and said second element are polarization filters.

Claim 3 (original): The modulator of claim 1 wherein said elements are integrated into said transport.

Claim 4 (original): The modulator of claim 1 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

Claim 5 (original): The modulator of claim 1 wherein said influencer alters said polarization property by changing a rotation angle of said wave

component in a range from about zero degrees to about ninety degrees.

Claim 6 (previously presented): The modulator of claim 1 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding.

Claim 7 (original): The modulator of claim 6 wherein said magnetic material includes permanent magnetic material.

Claim 8 (original): The modulator of claim 6 wherein said magnetic material is selectively magnetized responsive to an electric current.

Claim 9 (original): The modulator of claim 6 wherein said magnetic material is integrated into said fiber waveguide.

Claim 10 (original): The modulator of claim 5 wherein said elements are circular polarization filters having a crossed transmission orientation.

Claim 11 (original): The modulator of claim 5 wherein said elements are circular polarization filters having an aligned transmission orientation.

Claim 12 (original): The modulator of claim 1 wherein said wave component may be extinguished.

Claim 13 (original): The modulator of claim 1 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Claim 14 (previously presented): A radiation wave intensity modulating method, the method comprising:

producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;
receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;
affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and
interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 15 (original): The method of claim 14 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

Claim 16 (original): The method of claim 14 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

Claim 17 (previously presented): The method of claim 14 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

Claim 18 (previously presented): The method of claim 14 wherein said influencer alters said polarization property by changing a rotation

angle of said wave component in a range from about zero degrees to about ninety degrees.

Claim 19 (previously presented): The method of claim 14 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding.

Claim 20 (original): The method of claim 19 wherein said magnetic material includes permanent magnetic material.

Claim 21 (original): The method of claim 19 wherein said magnetic material is selectively magnetized responsive to an electric current.

Claim 22 (original): The method of claim 19 wherein said magnetic material is integrated into said fiber waveguide.

Claim 23 (original): The method of claim 18 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

Claim 24 (original): The method of claim 18 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

Claim 25 (original): The method of claim 14 wherein said wave component may be extinguished.

Claim 26 (original): The method of claim 14 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Claim 27 (previously presented): A radiation wave intensity modulating apparatus, comprising:

means for producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

means for receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

means for affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and

means for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 28 (original): The apparatus of claim 27 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

Claim 29 (original): The apparatus of claim 27 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

Claim 30 (previously presented): The apparatus of claim 27 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

Claim 31 (previously presented): The apparatus of claim 27 wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees.

Claim 32 (previously presented): The apparatus of claim 27 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material proximate said cladding.

Claim 33 (original): The apparatus of claim 32 wherein said magnetic material includes permanent magnetic material.

Claim 34 (original): The apparatus of claim 32 wherein said magnetic material is selectively magnetized responsive to an electric current.

Claim 35 (original): The apparatus of claim 32 wherein said magnetic material is integrated into said fiber waveguide.

Claim 36 (original): The apparatus of claim 31 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

Claim 37 (original): The apparatus of claim 31 wherein said producing step includes use of a first element, wherein said interacting step includes

use of a second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

Claim 38 (original): The apparatus of claim 27 wherein said wave component may be extinguished.

Claim 39 (original): The apparatus of claim 27 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Claim 40 (previously presented): A radiation wave intensity modulator, comprising:

a first polarizer for producing a wave component from a radiation source, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

a fiber waveguide for receiving said wave component, said waveguide having a core and one or more guiding regions disposed around said core;

a variable magnetic field generating structure, at least of portion of which is integrated with and operatively coupled to one or more of said one or more guiding regions, for affecting said polarization property of said wave component in said core responsive to a control signal; and

a second polarizer for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 41 (new): A computer program product comprising a computer readable medium carrying program instructions for modulation a radiation wave intensity when executed using a computing system, the executed program instructions executing a method, the method

comprising:

producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and

interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 42 (new): The computer program product of claim 41 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

Claim 43 (new): The computer program product of claim 41 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

Claim 44 (new): The computer program product of claim 41 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

Claim 45 (new): The computer program product of claim 41 wherein said influencer alters said polarization property by changing a rotation

angle of said wave component in a range from about zero degrees to about ninety degrees.

Claim 46 (new): The computer program product of claim 41 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding.

Claim 47 (new): The computer program product of claim 46 wherein said magnetic material includes permanent magnetic material.

Claim 48 (new): The computer program product of claim 46 wherein said magnetic material is selectively magnetized responsive to an electric current.

Claim 49 (new): The computer program product of claim 46 wherein said magnetic material is integrated into said fiber waveguide.

Claim 50 (new): The computer program product of claim 45 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

Claim 51 (new): The computer program product of claim 45 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

Claim 52 (new): The computer program product of claim 41 wherein said wave component may be extinguished.

Claim 53 (new): The computer program product of claim 41 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Claim 54 (new): A propagated signal on which is carried computer-executable instructions which when executed by a computing system performs a method, the method comprising:
producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;
receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;
affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and
interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

Claim 55 (new): The signal of claim 54 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

Claim 56 (new): The signal of claim 54 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

Claim 57 (new): The signal of claim 54 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

Claim 58 (new): The signal of claim 54 wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees.

Claim 59 (new): The signal of claim 54 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding.

Claim 60 (new): The signal of claim 59 wherein said magnetic material includes permanent magnetic material.

Claim 61 (new): The signal of claim 59 wherein said magnetic material is selectively magnetized responsive to an electric current.

Claim 62 (new): The signal of claim 59 wherein said magnetic material is integrated into said fiber waveguide.

Claim 63 (new): The signal of claim 58 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

Claim 64 (new): The signal of claim 58 wherein said producing step includes use of a first element, wherein said interacting step includes use of a

second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

Claim 65 (new): The signal of claim 54 wherein said wave component may be extinguished.

Claim 66 (new): The signal of claim 54 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.